



Australian Bureau of Statistics

Education Services

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Resources



MAT 14 - Is Australia the Greatest Olympic Sporting Nation?

You can download this activity, the teacher solutions and the assessment rubric as a rich text file (RTF) at the bottom of the page.

Subject Area

Mathematics

Overview

Students use medal tallies from the 2012 Olympics and populations to interpret results, discuss results and form conclusions. Students use skills such as creating and using mathematical formulae, graphing and explaining results.

Requirements

- Calculator

Instructions

Is Australia the greatest Olympic sporting nation?

At the 2012 Olympics, Australia came tenth in the medal tally, which is based on number of gold medals awarded. Countries who win lots of medals, like China and the USA, have higher populations than Australia.

1. Do you think a country that has a large population has an advantage in winning medals at the Olympics? Explain your reasoning.
2. Have a go: Below is a table of the top ten medalling countries, using the total number of medals. Can you figure out a way to calculate the number of people per medal in each country? Write your way of working this problem out in the space below.
3. Using this formula, calculate the number of people per medal for each country and fill in the table below.

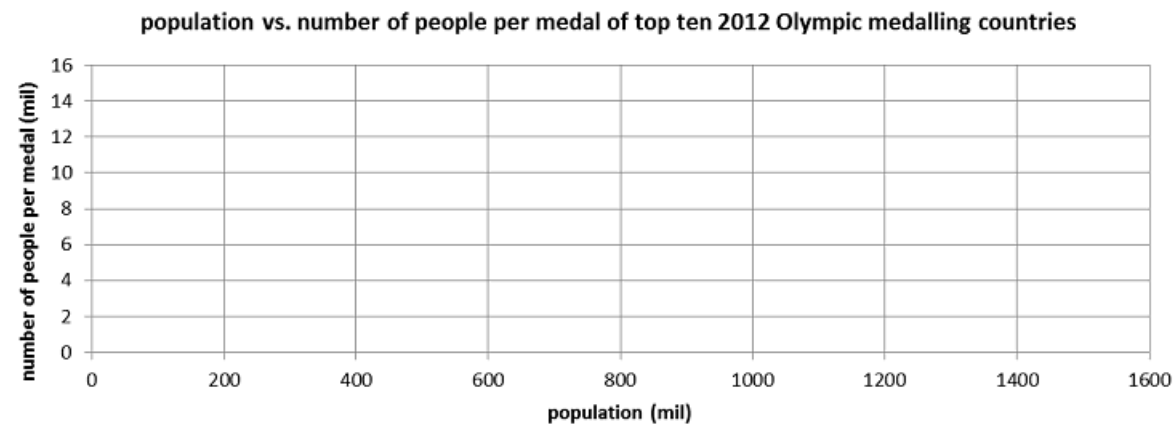
Top 10 medalling countries	# of medals	Population (mil)	# of people per medal (mil)
1. United States (USA)	104	314	
2. China (CHN)	88	1339	
3. Russian Federation (RUS)	82	143	
4. Great Britain (GBR)	65	59	
5. Germany (GER)	44	83	
6. Japan (JPN)	38	128	
7. Australia	35	23	
8. France (FRA)	34	66	
9. Republic of Korea (KOR)	28	50	
10. Italy (ITA)	28	61	

4. Is there is a relationship between the number of people living in a country and how many Olympic medals they get? If so, what is it?
5. Australia's number of people per medal is the smallest. Use the table and the patterns in the data to write a short paragraph to answer our question, 'Is Australia the greatest Olympic sporting nation?'

Extension

Extension:

6. Create a scatterplot showing population (mil) vs. number of people per medal (mil). Make sure each country is labelled.



7. Use this graph to explain why Australia is the greatest Olympic sporting nation.

Downloads

Student Worksheet

RTF

Teacher Solutions

RTF

Assessment Rubric

RTF

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